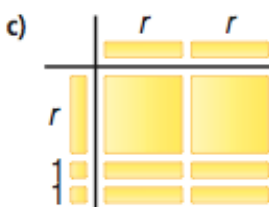
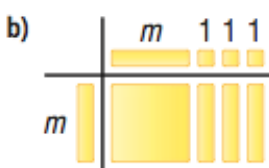
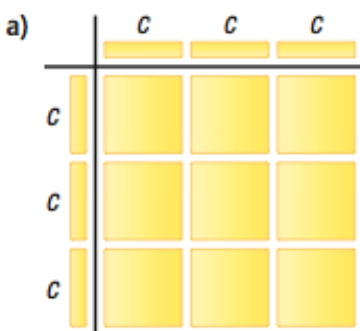


5. For each set of algebra tiles in question 4, write a division sentence.



10. a) Divide.

i) $\frac{12x}{2x}$

ii) $\frac{12x}{-2x}$

iii) $\frac{-12x}{2x}$

iv) $\frac{-12x}{-2x}$

v) $\frac{12x^2}{2x}$

vi) $\frac{12x^2}{2x^2}$

vii) $\frac{-12x^2}{2x^2}$

viii) $\frac{12x^2}{-2x^2}$

- b) In part a, explain why some quotients are equal.
 c) For which quotients in part a could you have used algebra tiles? For each quotient, sketch the tiles you could use.

11. Multiply or divide as indicated.

a) $(2r)(-6r)$

b) $(-16n^2) \div (-8n)$

c) $(-5g)(7g)$

d) $\frac{40k}{-10k}$

e) $(9h)(3h)$

f) $\frac{48p^2}{12p}$

g) $18u^2 \div (-3u^2)$

h) $\frac{-24d^2}{-8d^2}$

16. Use any strategy to determine each quotient.

a) $\frac{10x^2 + 4x}{2x}$

b) $(6x^2 + 4x) \div x$

c) $\frac{6y + 3y^2}{3y}$

d) $\frac{40x^2 - 16x}{8x}$

e) $\frac{15g - 10g^2}{5g}$

f) $\frac{-12k - 24k^2}{3k}$

g) $(24h^2 + 36h) \div (-4h)$

h) $(-8m^2 + 18m) \div (-2m)$

17. Assessment Focus

- a) Determine each product or quotient.

Use a different strategy each time.

i) $\frac{15n^2 + 5n}{5n}$

ii) $-3r(4 - 7r)$

iii) $(-16s^2 + 4s) \div (-2s)$

iv) $(t - 9)(4t)$

- b) Choose one product and one quotient in part a. Use a different strategy to solve each problem. In each case, which strategy do you prefer? Explain why.

18. a) Use algebra tiles to model the quotient

$$\frac{12x^2 + 12x}{2x}. \text{ Determine the quotient.}$$

- b) The polynomial $12x^2 + 12x$ can be represented by the areas of rectangles with different dimensions. Sketch and label the dimensions for as many different rectangles as you can. For each rectangle, write a division statement.

21. Determine each quotient.

a) $(12x^2 + 6xy) \div 3x$

b) $\frac{12gh + 6g}{2g}$

c) $(-27p^2 + 36pq) \div 9p$

d) $\frac{40rs - 35r}{-5r}$

e) $\frac{14n^2 + 42np}{-7n}$

23. a) The polynomial $54s^2$ represents the surface area of a cube. Determine a polynomial that represents the area of one face.
- b) Use your answer to part a. Determine the length of an edge of the cube.